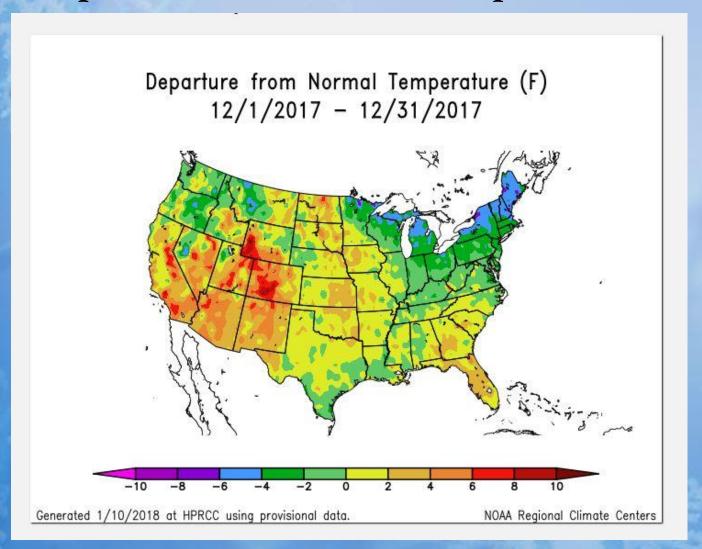
# The Month In Review

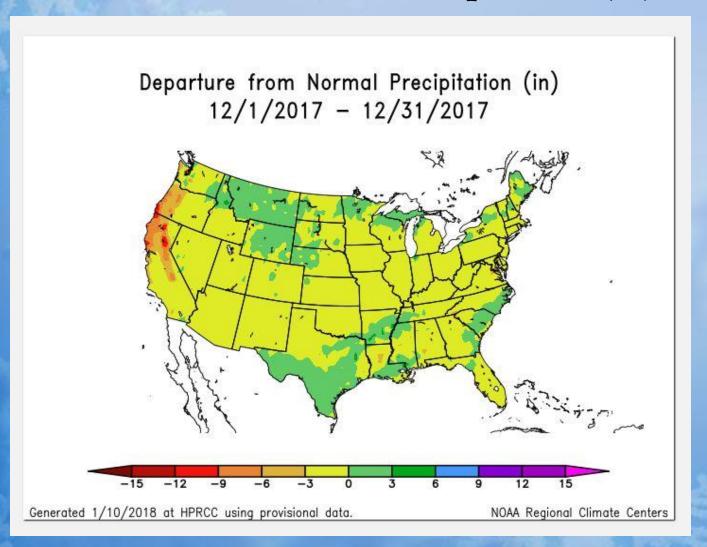
December 2017

National Weather Service Pendleton, Oregon

# Departure from Normal Temperatures



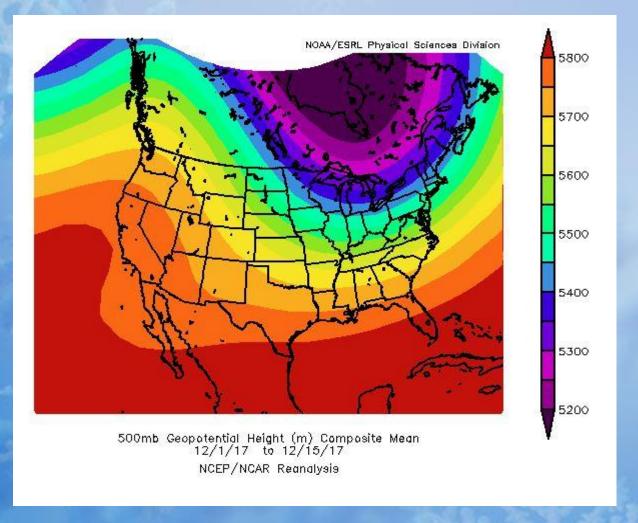
# Percent of Normal Precipitation (%)



	Max T	Max T D	Min T	Min T D	Ave T	Ave T D	PCPN	PCPN D
Yakima	38.5	2.7	25.3	4.0	31.9	3.4	0.36	-1.17
Kennewick	37.6	-2.3	28.3	-0.5	33.0	-1.3	0.94	-0.19
Walla Walla	37.1	-1.4	27.8	-0.6	32.5	-0.9	2.79	0.32
The Dalles	40.9	-0.7	30.8	0.4	35.9	-0.6	1.13	-1.56
Redmond	40.1	-0.4	16.4	-4.3	28.3	-2.3	0.12	-1.04
Pendleton Airport	36.6	-2.9	25.2	-1.7	30.9	-2.3	1.22	-0.25
La Grande	36.5	-1.1	20.2	-3.5	28.4	-2.3	1.44	-0.22

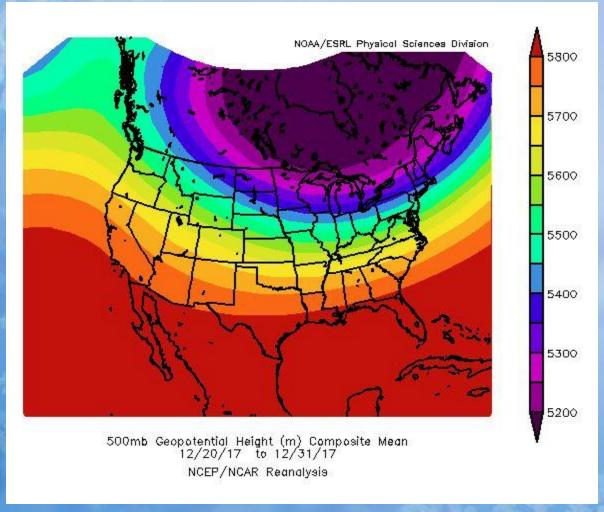
Temperatures during the month of December were not far from normal as a whole. There was a brief arctic intrusion between December 23-25, which also brought two snow storms that gave the forecast area a white Christmas. It was only the third white Christmas since 1996. Otherwise from the table above you can see that departures from normal were mainly 4 degrees or less either way.

# December 2017 Average Weather Pattern



The first half of December was marked by a long wave and persistent upper ridge that settled over the region. This resulted in a lengthy period of low clouds and fog with valley inversions in the lower elevations.

# December 2017 Average Weather Pattern



The second half of December was more influenced by the polar jet stream which was closer and therefore had more of an impact on the region. This resulted in a series of winter storms around Christmas time.

ZCZC PDXLSRPDT
NWUS56 KPDT 252359
PRELIMINARY LOCAL STORM
REPORT...SUMMARY
NATIONAL WEATHER SERVICE PENDLETON
OR
357 PM PST MON DEC 25
2017

..TIME... ...EVENT... ...CITY LOCATION...

..DATE... ...MAG.... ..COUNTY LOCATION..ST.. ...SOURCE....

..REMARKS..

0350 AM SNOW TIETON 46.70N

120.75W

12/25/2017 E1.0 INCH YAKIMA WA PUBLIC

0350 AM SNOW HERMISTON 45.83N

119.28W

12/25/2017 E3.0 INCH UMATILLA OR PUBLIC

0350 AM SNOW MILTON-FREEWATER 45.93N 118.39W 12/25/2017 E2.0 INCH UMATILLA OR PUBLIC

0357 AM HEAVY SNOW 1 NNW PENDLETON 45.69N 118.82W

12/25/2017 M4.1 INCH UMATILLA OR OFFICIAL NWS OBS

SINCE SUNDAY AFTERNOON.

# Heavy Snow on Christmas Day early in the Morning and on Christmas Eve



0530 AM 121.25W	SNOW	7 E	MOSIER	45.6	8N		
12/25/201	17 E3.0 IN	CH KI	LICKITAT	WA	PUBLIC		
ST	TLL SNOW	VING.					
0530 AM	HEAVY	SNOW	PENDLE	TON	45.67N	118.82W	
12/25/201	17 M4.5 IN	ICH U	MATILLA	OR	NWS EM	PLOYEE	
Ol	N THE SO	UTH					
HILL.							
0630 AM	HEAVY	SNOW	E PENDI	LETON	45.671	N 118.82W	
12/25/201	17 M5.0 IN	ICH U	MATILLA	OR	NWS EM	PLOYEE	
0700 AM 119. <b>2</b> 9W	SNOW	RIC	HLAND	46	29N		
12/25/201	17 M2.5 IN	ICH B	ENTON	WA	COCORA	HS	
24	HOUR AC	CCUMULA	TION				
0700 AM	SNOW	12 S	SW CANY	ON CITY	44.23N	119.04W	
12/25/201 COCORA		ICH G	RANT	OR			
24	HOUR AC	CCUMULA	TION				

# Heavy Snow on Christmas Day early in the Morning and on Christmas Eve



ı								
į	0700 AM 120.53W	SNOW	YAk	KIMA	46.59	N		
H		7 M2.1 IN	ICH Y.	AKIMA	WA			
3	COCORAL							
å								
ŧ	24	HOUR AC	CUMULA	TION				
	0720 AM 117.92W	SNOW	9 N	ELGIN	45.69	N		
	12/25/201 COCORAF	7 M4.4 IN HS	ICH U	NION	OR			
	24	HOUR AC	CUMULA	TION				
	0730 AM 120.01W	SNOW	SUN	INYSIDE	46.	32N		
	12/25/201	7 E2.0 IN	CH Y	AKIMA	WA I	PUBLIC		
	RE	PORT FRO	OM FACE	ВООК				
	0730 AM	HEAVY	SNOW	UMATILI	<sub>-</sub> A	45.91N 11	19.33W	
				MATILLA				
	,,,	,,			0.11			
	RE Monday		A FACEBC	OK. NEW	SNOW A	CCUMULA	TION THE	ROUGH
	MC	ORNING.						
		,						
	0744 AM 120.17W	SNOW	2 N1	NE COND	ON	45.26N		
	12/25/201 COCORAF		ICH G	ILLIAM	OR			
	24	HOUR AC	CUMULA	TION				
ı		400						500

Heavy Snow
on Christmas
Day early in
the Morning
and on
Christmas Eve



# Monthly Total Precipitation and Snowfall

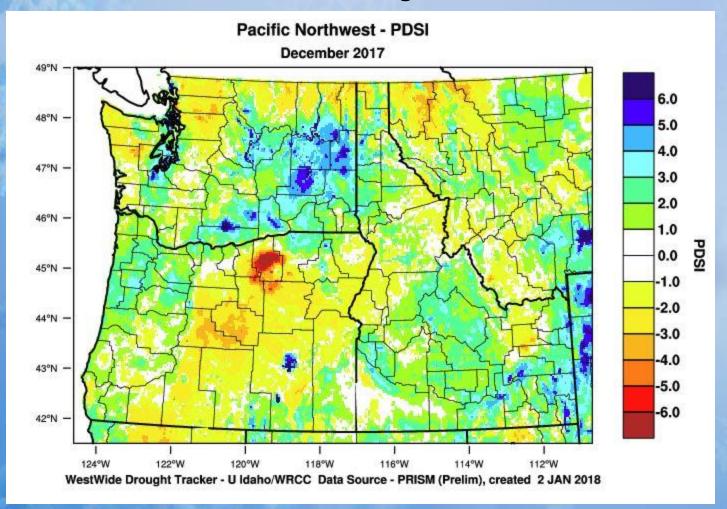
Location	Total Monthly Precip	Total Snowfall
Easton	4.43"	17.0"
Ellensburg	0.22"	$\mathbf{M}$
Yakima	1.14"	1.2"
Pasco	0.88"	4.0"
The Dalles	1.13"	$\mathbf{M}$
Walla Walla	2.79"	10.1
Hermiston	0.79"	M
Pendleton	1.22"	10.0"
Redmond	0.12"	0.2"
Meacham	4.91"	34.0"
John Day	0.40"	7.2"
Mt Adams RS	2.36"	M

# Monthly Max & Min Temperatures

Location	Highest Maximum Temperature	Lowest Minimum Temperature
Pendleton, OR	62	1
Redmond, OR	62	4
Pasco, WA	56	11
Yakima, WA	54	12
Walla Walla, WA	59	8
Bend, OR	57	6
Ellensburg, WA	49	6
Hermiston, OR	56	5
John Day, OR	53	2
La Grande, OR	46	-7
Prineville, OR	63	11
The Dalles, OR	55	19

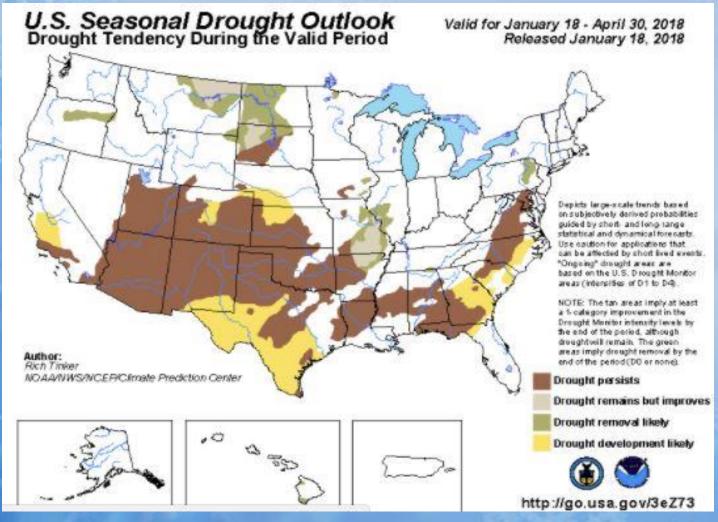
There were some temperatures extremes, but they were not that unusual for December.

### **December 2017 Drought Index**



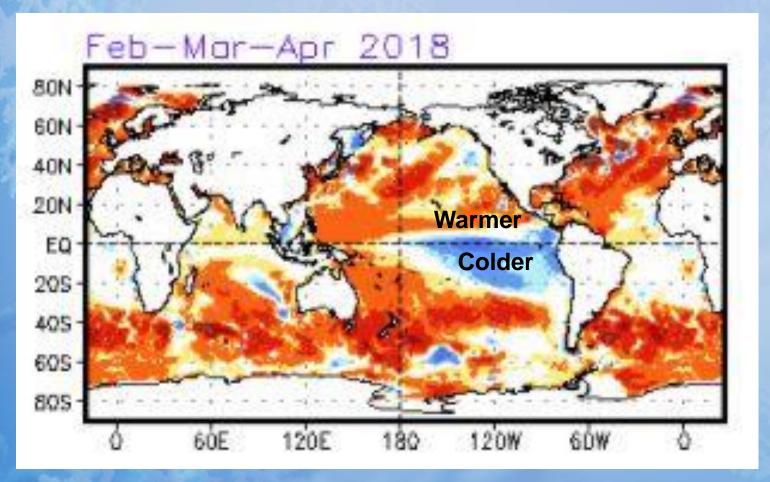
December had drought conditions mainly in the Oregon side of the forecast area (more areas in yellow and red), while in Washington, it was a little wetter than normal (more areas of blue and green). This comparison is only for northeast Oregon and Southeast Washington (i.e. the forecast area).

### **USA Seasonal Drought Outlook – January – April 2018**



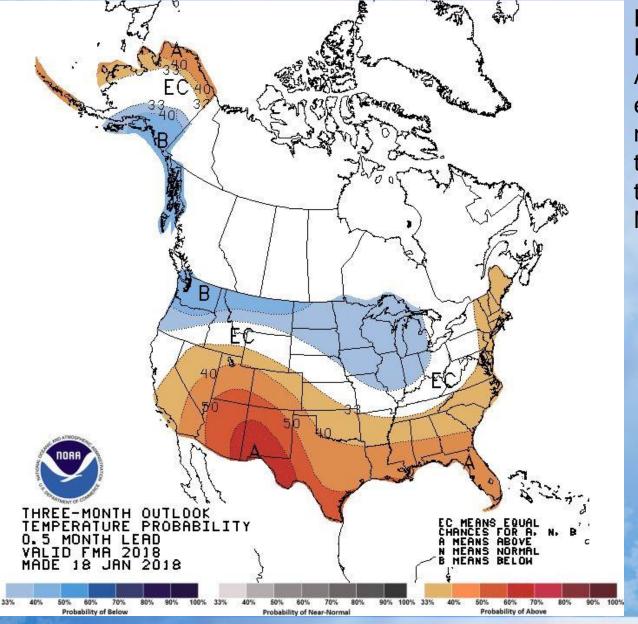
For the period of mid January through the end of April the Pacific Northwest The drought monitor indicates an inprovement and removal Of drought conditions over the Northeast Oregon Mountains while the Rest of the area is expected to remain the same.

## 3 Month El Nino/La Nina Outlook, Feb – Mar – Apr 2018



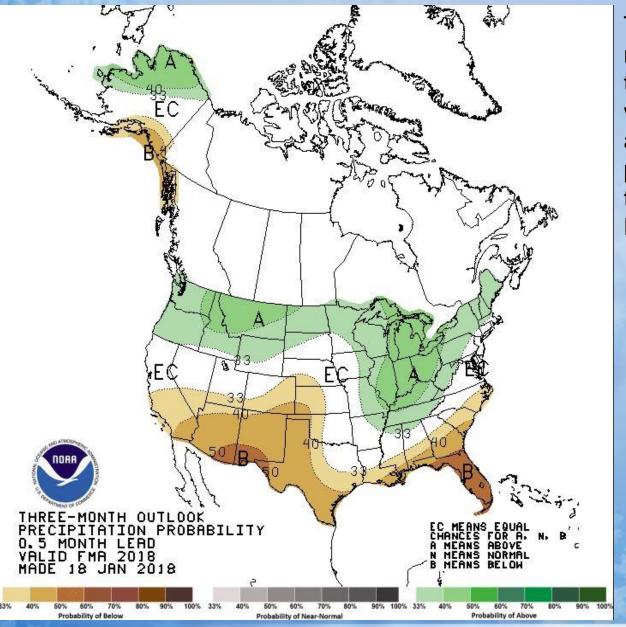
For the period February – April El Nino/La Nina Outlook, expect colder than normal SSTs over the tropical Pacific south of the equator, and above normal SSTs over the tropical Pacific north of the equator along the N. America west coast. Thus an El Nino for the SW USA and a La Nina for the northwest coast of S. America through April 2018 is expected.

# February, March, April, 2018 - 3 Month Temperature Outlook



For the period
February through
April we can
expect below
normal
temperatures over
the Pacific
Northwest.

# February, March, April, 2018 - 3 Month Precipitation Outlook



Through the month of February through April we can expect above normal precipitation over the Pacific Northwest.



Thank You!